



U.S. Department of Energy
Office of River Protection

P.O. Box 450
Richland, Washington 99352

01-OSR-0300

Mr. Ron F. Naventi, Project Manager
Bechtel National, Inc.
3000 George Washington Way
Richland, Washington 99352

Dear Mr. Naventi:

CONTRACT NO. DE-AC27-01RV14136 – OFFICE OF SAFETY REGULATION APPROVAL
OF BECHTEL NATIONAL, INC AUTHORIZATION BASIS CHANGE NOTICE ABCN-24590-
01-00005, "SRD AND ISMP CHANGES SUPPORTING IMPLEMENTATION OF THE RPP
FOR DESIGN AND CONSTRUCTION"

Reference: BNI letter from A. R. Veirup to M. K. Barrett, ORP, "Approval of Authorization Basis
Change Notice ABCN-24590-01-00005, SRD and ISMP Changes Supporting
Implementation of the RPP for Design and Construction," CCN 020879, 01-OSR-
0258, dated July 3, 2001.

On the basis of the enclosed safety evaluation, the U.S. Department of Energy, Office of River Protection, Office of Safety Regulation (OSR) approves the referenced ABCN-24590-01-00005 to the Safety Requirements Document (SRD) and the Integrated Safety Management Plan (ISMP) for the River Protection Project-Waste Treatment Plant. The amendment application was placed on the OSR website on July 3, 2001, and public comments were solicited. No public comments were received within the two-week comment period.

The stated purpose of the ABCN is to ensure consistency between the Radiation Protection Program (RPP) for Design and Construction, Rev. 7, and other authorization basis (AB) documents, specifically, the SRD and the ISMP. To accomplish this task, the amendment to the SRD and ISMP deletes requirements redundant with 10 CFR 835. In a number of cases, the ABCN also removes other programmatic AB commitments related to radiological protection. Though the ABCN provides no justification for removal of these programmatic commitments, the OSR was able to determine the changes did not result in reduction in commitment in the affected programmatic areas because other AB documents adequately address the programmatic areas. Therefore, these changes are acceptable. Unfortunately, additional review was required to make this determination, resulting in extension of the review period by approximately one week.

Mr. Ron F. Naventi
01-OSR-0300

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As part of the amendment implementation process, please submit within 14 days of receipt of this letter the revised pages of the SRD and ISMP and associated revision pages identifying all SRD and ISMP revisions to date. Also, the proposed change in the second sentence of ISMP Section 2.3.1 from "radiation protection program" to "radiological controls program" was apparently omitted as a typographical error from Section 2.3. Please correct this in the revised pages. This amendment is effective immediately and shall be fully implemented within 30 days, i.e., the provisions of the amendment may be used immediately; within 30 days, controlled copies of the SRD, ISMP, and subordinate documents must be modified to reflect the changes associated with this amendment.

If you have any questions about this letter, please contact George Kalman of my staff, (509) 372-0652. Nothing in this letter should be construed as changing the Contract, DE-AC27-01RV14136. If, in my capacity as the Safety Regulation Official, I provide any direction that your company believes exceeds my authority or constitutes a change to the Contract, you will immediately notify the Contracting Officer and request clarification prior to complying with the direction.

Sincerely,

Robert C. Barr
Safety Regulation Official
Office of Safety Regulation

OSR:JLP

Enclosure

cc w/encl:
M. Perks, BNI

**Safety Evaluation Report (SER)
of Proposed Authorization Basis Change Notice
ABCN-24590-01-00005
to the Integrated Safety Management Plan (BNFL-5193-ISP-01, Rev. 6) and
Safety Requirements Document Volume II (BNFL-5193-SRD-01-02, Rev. 4)
for the River Protection Project Waste Treatment Plant
by the Office of Safety Regulation**

1. Introduction

The River Protection Project Waste Treatment Plant (RPP-WTP) authorization basis is the composite of information provided by the Contractor in response to radiological, nuclear, and process safety requirements that is the basis on which the Office of Safety Regulation (OSR), Safety Regulation Official grants permission to perform regulated activities. The authorization basis includes that information requested by the Contractor for inclusion in the authorization basis and subsequently accepted by the OSR. The authorization basis for the RPP-WTP includes the Integrated Safety Management Plan (ISMP) and Safety Requirements Document (SRD). The ISMP defines a set of integrated activities that is directed toward the management or control of radiological, nuclear, and process hazards such that adequate protection is provided to workers, the public, and the environment. The SRD contains the approved set of radiological, nuclear, and process safety standards and requirements, which if implemented, provide adequate protection of workers, the public, and the environment against the hazards associated with the operation of the facility. By letter dated July 3, 2001,¹ the Contractor submitted a proposed amendment to the ISMP and SRD. This SER documents the OSR evaluation of the changes proposed by the Contractor.

The amendment proposes changes to several related sections of the ISMP and SRD. The proposed changes are to ensure consistency with BNFL-TWP-SER-003, *Radiation Protection Program for Design and Construction*, Rev. 7.

2. Background

The Contract² requires, in Section C.6, Standard 7(e)(2)(ii), the Contractor's integrated standards-based management program be developed to comply with the specific nuclear safety regulations defined in the effective rules of the 10 CFR 800 series of nuclear safety requirements and the regulatory programs established in DOE/RL-96-0006, *Top-Level Radiological, Nuclear, and Process Safety Standards and Principles for the RPP Waste Treatment Plant Contractor*. The Regulatory Unit, now OSR, conditionally approved Revision 1A of the Contractor's SRD in RL/REG-98-20, *DOE Regulatory Unit Evaluation of the BNFL Inc. Safety Requirements*

¹ BNI letter from A. R. Veirup to M. K. Barrett, ORP, "Approval of Authorization Basis Change Notice ABCN-24590-01-00005, SRD and ISMP Changes Supporting Implementation of the RPP for Design and Construction," CCN 020879, 01-OSR-0258, dated July 3, 2001.

² Contract No. DE-AC27-01RV14136, between the U.S. Department of Energy and Bechtel National, Inc., dated December 11, 2000.

Document, Revision 1A, dated December 2, 1998. This approval included an evaluation of the conditions identified during the review³ of Revision 0 of the SRD.

At that time, 10 CFR 835, *Occupational Radiation Protection*, did not address several important topics considered essential to protecting the workers, members of the public, and environment from the radiological hazard incident to operation of the waste treatment plant. These topics were addressed in the ISMP and Section 5.0, "Radiation Protection," of the SRD. Subsequently, 10 CFR 835 was revised to address several subjects including entry into high radiation areas (SRD Safety Criterion [SC] 5.1-1), control of accountable sealed radioactive sources (SC 5.1-3), records concerning sealed radioactive sources (SC 5.1-4), labeling of containers holding radioactive materials (SC 5.1-6), and receipt of packages containing radioactive material (SC 5.1-7). These changes to the regulation, and thus the Radiation Protection Program (RPP), resulted in redundancy in the SRD and, in some cases, SRD inconsistency with the regulation.

In accordance with Table S7-1, "Radiological, Nuclear, and Process Safety Deliverables of the Contract," a revised RPP, meeting the requirements of 10 CFR 835 was submitted November 28, 2000,⁴ as a prerequisite for authorization to begin construction. The OSR approved the revised RPP⁵ based on the Contractor's commitment⁶ to review and correct inconsistencies between its authorization basis documents (e.g., ISMP and SRD) and the RPP. ABCN-24590-01-00005 is the result of the Contractor's efforts to identify and resolve any AB inconsistencies with the 10 CFR 835 required RPP.

3. Evaluation

Changes to SRD, Rev. 4

The ABCN proposes to delete SRD SC 5.1-1 through 5.1-7 except 5.1-2 that addresses the respiratory protection program. The topics covered in: SC 5.1-1, access to high radiation areas; 5.1-3, accountable sealed radioactive sources; 5.1-4, records of sealed sources; 5.1-6, labeling of containers of radioactive material; and 5.1-7, receipt of packages of radioactive material are addressed in 10 CFR 835. The Contractor's RPP, Rev. 7, provides appropriate plans, schedules, and measures to ensure compliance with the 10 CFR 835 requirements concerning these topics. Based on this information, the OSR finds the proposed deletion of SC 5.1-1, 5.1-3, 5.1-4, 5.1-6, and 5.1-7 acceptable.

³ RL/REG-98-01, *DOE Regulatory Unit Evaluation Report of the BNFL Inc. Safety Requirements Document*, Rev. 0, March 1998.

⁴ CHG letter from J. O. Honeyman to W. J. Taylor, ORP, "Submission of the Revised Radiation Protection Program and Request for Closure of Authorization Basis Amendment Request ABAR-W375-00-00011 Through Submission of Authorization Basis Change Notice ABCN-W375-00-00049," CCN 016596C, 01-RU-0032, dated November 28, 2000.

⁵ OSR letter from R. C. Barr to R. F. Naventi, BNI, "Office of Safety Regulation (OSR) Approval of the Bechtel National Inc. Radiation Protection Program (RPP) for Design and Construction, Revision 5A," 01-OSR-0123, dated April 20, 2001.

⁶ BNI letter from R. F. Naventi to W. J. Taylor, ORP, "Bechtel National Inc., Response to the Office of Safety Regulation Second Set of Questions Regarding the Radiation Protection Program, Revision 5A," CCN 018459, dated March 5, 2001.

SRD, SC 5.1-5 requires that provisions be made for the temporary storage, packaging, and handling of facility generated solid radioactive waste to prevent the release of radioactive materials to the environment or radiation exposures in excess of specified limits. SC 5.1-5 is not inconsistent, or redundant, with the RPP since 10 CFR 835 does not address the topic. Though not documented by the ABCN, deletion of SC 5.1-5 also is not a reduction in commitment because radioactive waste management is addressed elsewhere in the authorization basis documents; it is identified as a programmatic element of the radiological controls program specified in DOE G 441.1-1, *Management and Administration of Radiation Protection Programs Guide*. This guide is cited in SC 5.0-1 as an "Implementing Code and Standard." In addition, SC 5.3-3 specifies requirements for a waste management program. As a result of the above information, the OSR finds deletion of SC 5.0-1 acceptable.

SRD, SC 5.4-10 has been revised to delete statements that are no longer correct since the RPP, Rev. 7, now describes plans and measures for compliance with the monitoring and contamination control requirements of 10 CFR 835. The reviewers conclude the proposed change is warranted to assure consistency with the RPP.

SRD, SC 7.7-6 contains a reference in the Regulatory Basis to 10 CFR 835.1301 (e). Since this reference is no longer correct and the RPP adequately addresses the need to inform individuals of any exposure reported pursuant to the occurrence reporting system to the individual, it is appropriate to delete the reference to 10 CFR 835.1301 (e). Given this information, the OSR concludes the proposed change to SRD SC 7.7-6 is appropriate.

Changes to ISMP Rev. 6

The proposed changes to Sections 1.3.8, 3.3.1.6, 3.9.1.2 and Table 4-1, Chapter 5.0, item 1 correct references to documents that have been replaced or are no longer applicable to the WTP, such as transition to the U.S. Nuclear Regulatory Commission requirements expressed in 10 CFR Part 20. The OSR considers the proposed changes acceptable.

The proposed change to Section 2.3 deletes Section 2.3.2 that discussed the potential need for an exemption to 10 CFR 835 requirements for workplace monitoring (e.g., dosimetry calibration) that meet DOE Laboratory Accreditation Program (DOELAP) requirements. The Contractor believes this exemption will no longer be needed; in its RPP, Rev. 7, the Contractor committed to implementation of a DOELAP program. As a result, the OSR considers the deletion in ISMP Sections 2.3 and 2.3.2 acceptable.

The proposed changes to Section 2.3.1 clarify that the Contractor will be in full compliance with the applicable sections of 10 CFR 835 as discussed in the RPP (i.e., rather than full compliance with 10 CFR 835). No exemptions have been granted to the Contractor for Rev. 7 of the RPP for Design and Construction. Thus, the law (10 CFR 835.101) holds the Contractor fully accountable for compliance with applicable portions 10 CFR 835 despite the proposed change to ISMP Section 2.3.1 and the discussion in Section 6 of the RPP about what is or is not enforceable. Based on this information, the OSR concludes the proposed changes to ISMP Section 2.3.1 are acceptable.

Proposed changes to Section 2.3.1 that change "radiation protection program" to "radiological controls program" are consistent with SRD, SC 5.0-1 to the extent the Contractor implements the guidance expressed in "Implementing Codes and Standards" DOE G 441.1-1, *Management and Administration of Radiation Protection Program Guide*. DOE G 441.1-1 states in part, "Other functional elements necessary for an integrated worker health and safety program are not addressed in this guide, but should be integrated with a radiological control program. These other functional elements include: respiratory protection, radioactive material shipment and receipt, radioactive waste management, and emergency response." Section 2.3.1 identifies ten topics to be covered by the radiological controls program. The ten topics as currently written do not clearly address radioactive material shipment and radiological emergency response. This is not considered a reason to reject the ABCN since the Contractor is obligated to follow the "Implementing Codes and Standards" listed for SC 5.0-1 that identify DOE G 441.1-1. As a result of this information, the OSR concludes the proposed changes to ISMP Section 2.3.1 is acceptable.

The ABCN proposed changes to ISMP Sections 2.3.1, and 2.3.3 delete reference to the Initial Safety Analysis Report (ISAR) Chapters 3.0 and 5.0. While some of the ISAR commitments are outdated and conflict with 10 CFR 835 requirements, others provide detailed programmatic commitments (e.g., ventilation, radioactive waste management, administrative control levels) that are not specifically addressed by 10 CFR 835 and provide no inconsistency with Rev. 7 of the RPP (i.e., the stated purpose of the ABCN). The ABCN provides no justification for deletion of such commitments nor does the ABCN contain information indicating where the commitment resides. Such information should be provided with future ABCN submittals. The OSR found the commitments addressed at a general programmatic level elsewhere in the authorization basis documents or in programs, plans and measures specified by the RPP (e.g., Waste Treatment Plant Radiological Control Manual). As a result, the proposed deletions do not reduce the programmatic level of commitment. Based on this information, the OSR considers the proposed changes to Sections 2.3.1 and 2.3.3 acceptable.

Proposed changes to Sections 3.9.2 and Table 4-1 clarify the sources used as guidance for the commitment to implement an ALARA program. These sources include DOE G 441.1-2, *Occupational ALARA Program Guide*, and NRC Regulatory Guide 8.8, *Information Relevant to Ensuring that Occupational Radiation Exposures at Nuclear Power Stations will be As Low as is Reasonably Achievable*. These are consistent with SRD Implementing Codes and Standards, DOE Policy, and the RPP, Rev. 7. As a result, the OSR finds the proposed changes to ISMP, Sections 3.9.2 and Table 4-1 acceptable.

The proposed rewrite to Section 4.1.2.3 clarifies that the RPP addresses protection of the public and workers when accessing controlled areas and the Environmental Radiation Protection Program addresses protection of the public and environment from normal activities that may release radiological effluents. The rewrite continues to reference SRD, Chapter 5.0, that includes the requirement for a "Radiological Control Program" that would contain measures to minimize effluent releases. In addition, SRD, SC 5.3-2 speaks to ensuring that releases of radioactive materials to the environment and exposures to the public are kept ALARA. This suffices to ensure the Contractor's integrated worker health and safety program will address those functional elements. Based on this information, the OSR finds the proposed rewrite to ISMP, Section 4.1.2.3 acceptable.

This ABCN uses Revision 7 of the RPP for Design and Construction as its baseline document. Since the ABCN submittal to the OSR, the Contractor issued, and the OSR approved, Revision 8 of the RPP for Design and Construction^{7,8}. Revision 8 does not alter any of the requirements contained in Revision 7. Revision 8 adjusts the RPP to allow the RPP to be applicable to waste treatment plant activities anywhere on the Hanford Site.

Based on the above information, the OSR concludes the proposed changes to the SRD and ISMP should not impact waste treatment plant safety and health.

4. Conclusion

On the basis of the considerations described above, the OSR concludes there is reasonable assurance that the health and safety of the public and the workers will not be adversely affected by the proposed amendments. The proposed amendments comply with applicable laws, regulations, and RPP-WTP contractual requirements. Accordingly, based on this evaluation, the OSR approves the amendment to the SRD and ISMP as proposed by ABCN-24590-01-00005.

⁷ BNI letter from A. R. Veirup to M. K. Barrett, ORP, "Authorization Basis Change Notice ABCN-24590-01-00003, RPP-Revised Applicability to Include All Activities Performed on the Hanford Site," CCN 020735, 01-OSR-0247, dated June 27, 2001.

⁸ ORP letter from R. C. Barr to R. F. Naventi, BNI, "Office of Safety Regulation (OSR) Response to Bechtel National, Inc. (BNI) Authorization Basis Change Notice ABCN-24590-01-00003, RPP Revised Applicability to Include All Activities Performed on the Hanford Site," 01-OSR-0265, dated July 19, 2001.